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UNITED STATES DEPARTMENT OF AGRICULTURE
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Entomology Research Division

WHERE HONEY COMES FROM

It would perhaps be a reflection upon the intelligence of the average individual to ask or explain where butter comes from, or for that matter to ask any other equally simple question about any agricultural commodity commonly produced in the United States. Yet it is a fact that relatively few people know where honey comes from or just what it really is.

Although beekeeping is one of the oldest of the agricultural industries, it is one about which the average person knows almost nothing. One reason for this is that the honey bee is all too well known for the facile use of its sting. The mere fact that honey bees sting - although they do so only in self-defense - has kept the average person from becoming too inquisitive or from evincing too much interest in a bee, a beehive, or an apiary. When strangers can be induced to come close to a beeyard or apiary, it is common to hear them remark that the bees have a particular antipathy for them - that they like bees but that they just cannot be around them without getting stung. The matter of everyday courage does not enter into their explanations. It is commonly believed that a man who handles bees with apparent impunity does so because the bees know him, or know their master, as it is often put. As a matter of fact, there can be nothing to the theory that the bees know their master, for the life of the worker bee is only a scant six weeks. However, the converse is true, and in order to handle or keep bees successfully the master must thoroughly know his bees.

It is difficult to understand how a small insect like the honey bee, which still remains a wild creature in spite of its association with man since the dawn of history, can be kept under almost perfect control. It is difficult also to conceive how many countless million honey bees are required to provide the tons of honey needed to fill the shelves of the stores from one end of the country to the other. How is it possible for the bees to make such a delicious product unaided and without the assistance of any manufacturing process? Yet it is absolutely true that they do this very thing. Did you every stop to think that honey is the only sweet that is not manufactured and yet is produced in sufficient quantities to supply our tables? In honey Mother Nature put all the ingredients needed to make it a perfect food.

Honey is as old as antiquity. We learn of it through the writings of the old philosophers, and there are numerous references to bees and honey in the Bible, in the picture writings of the Egyptians, and in the records of empires long since passed away. In these we first learned about the delicious and health-giving properties of honey and the wonders of the honey bee.

No other food has such romantic associations. The word honey has crept into our vocabulary as a superlative of the highest degree. Is it any wonder that we use it as an expression of affection when speaking of those nearest and dearest to us? To understand the significance of the word honey, you have but to recall that every drop of honey has its origin in the bosom of a delicate flower, where it has lain exposed to the invigorating rays of the summer's sun and mixed with the sparkling

morning dew. You can close your eyes and imagine fields of clover, and fill your lungs with the perfumed air that wafts from the myriads of nodding blossoms, or if you ever walked through an orange grove when it is in full bloom, where the air is heavy with perfume, you can understand something of the romance of this incomparable food.

There are many distinctive kinds of honey, each depending upon the variety of flower from which the bees gathered the nectar. To know how precious this nectar is one must realize that a single bee has to visit several hundred blossoms before it can obtain enough of the elusive nectar to carry back to the hive a pay-load, which at the most amounts to only a tiny drop. After the nectar is brought into the hive it is ripened in this mysterious laboratory of the bee and transformed into thick, rich, mellow honey, every pound of which requires the heavy sacrifice in the lives of these tiny creatures. Is it any wonder that man with all his ingenuity has never been able to manufacture or to synthesize honey even in his best equipped laboratories.

Honey is by no means an ordinary food. It contains in small quantities most of the essential minerals. The sugars found in it are the simplest known. The bee has prepared them in such a manner that they can be assimilated almost directly without any digestive process. No other sugar furnishes a more readily available source of energy.

Honey has another characteristic that can well be taken into consideration. Many of us are worrying about getting too fat. In cutting down our carbohydrates we are left with a craving for sweets. Honey, however, because of its fragrance, in addition to its sweetness, seems so much richer than the ordinary forms of readily available sweets that relatively small quantities satisfy our craving. It contains within it, we might say, an automatic danger signal to the excessive use of sweets. While honey is as much a fat-producing food as any other common sugar, it may be said, for the reason just given, that it is not so fattening as the sugars which are less sweet and less rich.

And here's still another very strong recommendation for honey. Neither the common bacteria, or molds, which cause decay in fruits and vegetables, and spoilage in meats, nor the most dangerous germs, can live in honey. No matter what the appearance of the honey may be, whether it is the water-white honey produced from clover and alfalfa or the dark-brown honey produced from buckwheat, or light golden orange honey, you may be sure that it is clean and that it contains nothing injurious. There is no food cleaner or safer than honey.

Before honey can be produced in commercial quantities hundreds of acres of one kind of flower must be accessible to the bee, and so on our markets we have only between two or three dozen floral types; for instance, white clover honey from the rich dairy districts in the region surrounding the Great Lakes, and sweet clover and alfalfa honey from the irrigated sections of the Rocky Mountains and from the broad plains of the Dakotas and Nebraska. On the West Coast you will find honey from orange, from sage in the mountains and foothills, from star thistle from the rich Sacramento Valley, fireweed honey from the burnt-over forest areas of Washington and Oregon, tupelo honey from the swamp forests of the South, and gallberry and mesquite honeys. Thus one could name an almost infinite number of varieties of plants which are of importance in furnishing nectar. If you have tried only one variety of honey and find that it is not to your liking, there is bound to be honey from some floral source which you will like. In England people pride themselves upon the knowledge of the various floral types of honey, and it is not at all uncommon in a well-equipped home to find the master of the house offering his guests a half dozen different kinds of honey.

It is only natural to expect a variation not only in the color and flavor of honey, but also in its physical appearance. Tupelo honey from the swamps of the South and sage honey from the foothills of California remain in clear liquid form almost indefinitely. Honey produced from alfalfa and sweet clover, however, crystallizes into solid form shortly after its removal from the hive. There is still another type, like tulip honey from the giant tulip poplar trees of the Appalachian region, which forms crystals, but it does not solidify like the sweet clover honey, for example. It assumes a mushy consistency. These are but manifestations of the different floral sources and have nothing to do with the pureness of the honey. Our pure food laws take adequate care to keep adulterated honeys off the market.

Honey is best used as a spread on bread and butter, or on hot biscuits, either in the liquid or extracted form, or as comb honey. Crystallized or solid honey, which can be spread like butter, is also in a convenient form for use. Cakes and baked goods made with honey retain moisture, and thus remain fresh much longer than those which do not contain it. Tea sweetened with honey is given a delicate and mysterious flavor of the Far East which cannot be obtained in any other manner. Of course, on grapefruit and other crushed fruits, honey makes a delicious combination. Honey always adds something besides just sweetness. It contains the delicate flavor and fragrance of the countless flowers of woods and meadows, of mountain slopes and valleys, and is a food that is old and tried and one which has stood the test of forgotten centuries.

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